

Appendix E

Attorney's Docket No.: NEONODE.P004 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent Application of:)	
)	Examiner: Ryan F. Pitaro
Magnus Goertz)	
)	Art Unit: 2174
Application No: 10/315,250)	
)	
Filed: December 10, 2002)	
)	
For: USER INTERFACE FOR)	
MOBILE HANDHELD)	
COMPUTER UNIT)	
)	

Mail Stop AMENDMENT
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AND RESPONSE TO OFFICE ACTION
UNDER 37 C.F.R. §1.111

Sir:

In response to the Office Action dated December 23, 2008, applicant respectfully requests that the above-identified application be amended as follows:

IN THE CLAIMS:

Please cancel claims **17** and **19 – 47** without prejudice.

Please substitute the following claims for the pending claims with the same number:

1. (currently amended) A computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

a touch sensitive area in which representations of a ~~plurality of functions~~ at least one function are displayed, and each function of said ~~plurality of functions~~ at least one function being mapped to a corresponding location in the touch sensitive area at which the representation of the function is displayed, and being activated by an object touching the corresponding location and then gliding along the touch sensitive area away from the touched location.

2. (currently amended) The computer readable medium of claim **1**, wherein one function from the ~~plurality of functions~~ at least one function, when activated, causes the user interface to display icons representing different services or settings for a currently active application.

3. (previously presented) The computer readable medium of claim **2**, wherein the user interface is characterised in, that a selection of a preferred service or setting is done by tapping on a display icon corresponding to the preferred service or setting.

4. (currently amended) The computer readable medium of claim **1**, wherein one function from the ~~plurality of functions~~ at least one function, when activated, causes the user interface to display a keyboard and a text field.

5. (previously presented) The computer readable medium of claim **4**, wherein said text field is used for inputting and editing of text through said keyboard.

6. (currently amended) The computer readable medium of claim **1**, wherein one function from the ~~plurality of functions~~ at least one function, when activated, causes the user interface to display a list with a library of available applications and files on the mobile handheld computer unit.

7. (previously presented) The computer readable medium of claim **6**, wherein the user interface is characterised in, that a selection of an application or file is done by gliding the object along said touch sensitive area so that a representation of a desired one of said application or file is highlighted, raising said object from said touch sensitive area, and then tapping on said touch sensitive area.

8. (previously presented) The computer readable medium of claim **7**, wherein the user interface is characterised in, that at any given time said list presents only files or only applications, and that an area of said list presents a field through which said list can be changed from presenting files to presenting applications, or from presenting applications to presenting files.

9. (currently amended) The computer readable medium of claim **7**, wherein the user interface is characterised in, that, one item in said list is highlighted by a moveable marking, and the user interface enables list navigation whereby gliding the object along the touch sensitive area in a direction towards the top of said list or towards the bottom of said list causes said marking to move in the same direction without scrolling the list.

10. (currently amended) The computer readable medium of claim **9**, wherein the user interface is characterised in, that, if the number of applications or files in said list exceeds the number of applications or files that can be presented on said touch sensitive area as content, and if the object is (i) glided along said touch sensitive area to the top or bottom ~~position~~ of said touch sensitive area, then (ii) raised above said touch sensitive area, then (iii) replaced on said touch sensitive area, and then (iv) again glided along said touch sensitive area to the top or bottom of said touch sensitive area, said list navigation pages the content of said ~~touch sensitive area will be replaced~~ list up or down by one whole page.

11. (currently amended) The computer readable medium of claim **10**, wherein the user interface is characterised in, that if the object is raised from any first position on said touch sensitive area and then replaced on any second position on said touch sensitive area, said list navigation can be continued from said second position.

12. (currently amended) The computer readable medium of claim **1**, wherein the user interface is characterised in, that an active application, function, service or setting is ~~moved on~~ advanced one step by gliding the

object along the touch sensitive area from left to right, and that the active application, function, service or setting is closed or backed one step by gliding the object along the touch sensitive area from right to left.

13. (currently amended) The computer readable medium of claim **1**, wherein the user interface is characterised in, that said representations of said ~~plurality of functions~~ at least one function are located at the bottom of said touch sensitive area.

14. (previously presented) The computer readable medium of claim **1**, wherein the touch sensitive area is 2-3 inches in diagonal dimension.

15. (previously presented) An enclosure adapted to cover the mobile handheld computer unit according to Claim **1**, characterised in, that said enclosure is provided with an opening for said touch sensitive area.

16. (previously presented) The enclosure according to Claim **15**, characterised in, that said enclosure is removable and exchangeable.

17. (cancelled)

18. (currently amended) ~~[[A]]~~ The computer readable medium according to ~~Claim **17**~~ of claim **1**, characterised in, that said computer program ~~product~~ code is adapted to function as a shell upon an ~~operations~~ operating system.

19. – 47. (cancelled)

REMARKS

Applicant has carefully studied the outstanding Office Action. The present amendment is intended to place the application in condition for allowance and is believed to overcome all of the objections and rejections made by the Examiner. Favorable reconsideration and allowance of the application are respectfully requested.

Applicant has cancelled claims **17** and **19 – 47**, and amended claims **1, 2, 4, 6, 9 – 13** and **18** to properly claim the present invention. No new matter has been introduced. Claims **1 – 16** and **18** are presented for examination.

In Paragraphs 3 and 4 of the Office Action, the Examiner has rejected claim **1** under 35 U.S.C. §102(e) as being anticipated by Nakajima et al., US Patent No. 6,346,935 (“Nakajima”).

In Paragraphs 5 and 6 of the Office Action, the Examiner has rejected claims **2 – 11** and **14 – 18** under 35 U.S.C. §103(a) as being unpatentable over Nakajima in view of Rogue, “Palm Pilot: The Ultimate Guide, 2nd Edition (“Rogue”). Applicant has canceled claim **17** without acquiescence to the Examiner’s reasons for rejection and respectfully submits that rejection of those claims is thus rendered moot.

In Paragraph 7 of the Office Action, the Examiner has rejected claims **12** and **13** under 35 U.S.C. §103(a) as being unpatentable over Nakajima in view of Rogue, and further in view of O’Rourke, US Patent No. 7,225,408 (“O’Rourke”).

Distinctions between Claimed Invention and U.S. Patent No. 6,346,935 to Nakajima et al., Rogue, Palm Pilot: The Ultimate Guide, 2nd Edition, and U.S. Patent No. 7,225,408 to O'Rourke

Aspects of the subject invention concern a touch-based user interface with functionalities for running interactive applications using touch-based icons, for inputting text using a touch-based keypad, and for managing files using a touch-based file listing. User inputs include finger taps and movements. One such movement is a "rubbing" / "swiping" / "touch-and-glide" movement, whereby a finger touches a touch-sensitive screen at a location where an icon for a function is displayed, and then rubs / swipes / glides, along the touch screen away from the location without lifting the finger. The touch-and-glide movement of the subject claimed invention is illustrated in FIGS. 2, 7 and 10 of the original specification by a left-arrow and a thumb touching a touch-sensitive screen.

The touch-and-glide movement of the subject claimed invention is used to activate functions (original specification/ Abstract; page 2, lines 25 – 28; page 5, lines 24 – 27; FIG. 2; original claim **1**), and to scroll a selector forward and backward within a list to select a desired item in the list, and to page up and page down within a list (original specification/ page 3, lines 28 – page 4, line 2; page 7, lines 7 – 10; page 7, line 27 – page 9, line 14; FIGS. 7 and 10; original claims **7**, **9** and **10**). The touch-and-glide movement of the subject claimed invention activates a function that corresponds to the icon displayed at the touch point.

Nakajima teaches several touch pads for operating a notebook personal computer. The touch pads are designed efficiently so as to avoid waste of their touch-sensitive areas caused by raised frames

that surround the touch-sensitive areas. As shown in FIG. 13 of Nakajima, and described at col. 2, lines 52 – 65, for prior art touch pads, the regions of a touch-sensitive area that border the inner periphery of the frame, along a strip of width G, are blocked by the frame from access by a finger, F. As such, these border regions of the prior art touch-sensitive area are wasted.

The touch pads of Nakajima have frames with inner peripheries that are designed to enable a user to access border regions of the touch-sensitive areas. Examples of such designs are shown in FIGS. 5, 6 and 9 of Nakajima. A no-sensor area, denoted Ans in FIG. 9, separates an effective sensor area, denoted Ls in FIG. 9, from the inner periphery of frame 6E. Recesses and curvatures in the inner periphery of the frame make it possible for a finger to touch all portions of effective sensor area Ls, including the edges and corners thereof. Moreover, the inner periphery of frame 6E serves as a convenient guide, to assist the finger in moving to a desired edge and corner of effective sensor area Ls. In distinction, these edge and corner regions are inaccessible with the prior art touch pad shown in FIG. 13 of Nakajima.

The edge and corner regions of the touch-sensitive areas, when touched, trigger activation of functions corresponding to the touched regions. FIGS. 16 and 21 of Nakajima, and the description at col. 17, line 60 – col. 18, line 30, show an exemplary correspondence between border regions 2202 - 2207 of a touch-sensitive area 2101, and operations that they trigger when double-tapped.

Rogue is a user's guide for the PalmPilot device. Rogue teaches how to operate the PalmPilot's touch-based user interface, and the various functions that are available.

O'Rourke describes a medical information system and a user interface for medical staff to access, process and update patient record information via portable palmtop devices, and to transfer such information between portable devices. The user interface of O'Rourke is illustrated in FIGS. 9 – 20 of O'Rourke.

Response to Examiner's Arguments

In rejecting independent claim **1**, the Examiner, citing Nakajima col. 15, lines 1 – 15, has indicated that Nakajima teaches activating a function by an object touching a location corresponding to the function and then gliding along the touch sensitive area away from the location.

Applicant respectfully submits that the frame-guided movement of Nakajima is of a fundamentally different nature than the touch-and-glide movement of the subject claimed invention. The frame-guided movement of Nakajima glides over a non-touch sensitive portion of the screen. Specifically, as shown in FIG. 9 of Nakajima and described at col. 16, line 4 – page 17, line 17, the gliding movement occurs over the no-sensor area Ans. As recited by Nakajima at col. 9, line 55: *"Between the inner periphery of the frame 6E and the effective sensor area Ls, there is an area including no sensors, that is, the non-sensor area Ans."* Gliding an object over the no-sensor area Ans ensures that the edges and corners of the effective sensor area Ls are accessible and not wasted, which is the first objective of Nakajima (Nakajima/ col. 2, lines 52 – 65; col. 16, lines 19 – 24).

The following table summarizes some of the relevant distinctions.

TABLE I: Partial list of distinctions between frame-guided movements of Nakajima and touch-and-glide movements of the claimed invention	
Frame-guided movement of Nakamura	Touch-and-glide movement of the claimed invention
Glide is over non-touch sensitive portion of screen	Glide is over touch-sensitive portion of screen
Glide followed by touch	Touch followed by glide
Glide is toward touch point	Glide is away from touch point
Glide is along periphery of touch-sensitive area	Glide is along interior of touch-sensitive area
Glide movement is guided by inner periphery of raised frame	Glide movement is unguided
Only the touch point is processed by the user interface	Both the touch point and the glide are processed by the user interface
Frame-guided touch has the same effect as a touch alone	Touch-and-glide has a different effect than a touch alone

In rejecting dependent claim **2**, the Examiner, citing Rogue, Figure 1.2, has indicated that Rogue teaches a function which, when activated, causes the user interface to display icons representing different services or setting for a currently active application. Applicant respectfully submits that the PalmPilot applications buttons is used to display icons representing installed programs, and does not relate to a currently active application. Moreover, the PalmPilot applications button is used to launch a not-currently active application.

In rejecting dependent claims **6** and **8**, the Examiner, citing Rogue, Sidebar 1, Categories, has indicated that Rogue teaches a function which, when activated, causes the user interface to display a list of available applications and files. Applicant respectfully submits that the PalmPilot category pages described in Rogue do not display files. They only display installed applications, as indicated by Rogue in Sidebar 1.

Moreover, Rogue does not describe changing the display from displaying only applications to displaying only files, and vice versa.

In rejecting dependent claim **9**, the Examiner, citing Rogue, Figure 1.4, has indicated that Rogue teaches a gliding input that causes a marking to move up and down a list without scrolling the list. Applicant respectfully submits that the PalmPilot menus, as described in Rogue, are navigated via tapping and not via gliding.

In rejecting dependent claims **10** and **11**, the Examiner, citing Nakajima, col. 14, lines 45 – 57, has indicated that Nakajima teaches a compound movement, used to advance an entire page of a list, by (i) gliding an object along a touch-sensitive area to the top or bottom of the touch-sensitive area, (ii) raising the object from the touch-sensitive area, (iii) replacing the object on the touch-sensitive area, and (iv) gliding the object again along the touch-sensitive area to the top of bottom of the touch-sensitive area. Applicant respectfully submits that Nakajima describes an up/down scroll function, which is not the glide-raise-replace-glide movement of the subject claimed invention. Moreover, the up/down scroll function causes a list to advance by one line, and not by an entire page. Applicant further respectfully submits that Nakajima does not describe a list navigation movement that continues when the object is (i) raised from a first position on the touch-sensitive area, and (ii) replaced at a second position of the touch-sensitive area.

In order to further clarify these distinctions, applicant has amended claim **10** to elaborately list the four stages of the compound glide-raise-replace-glide list navigation movement.

In rejecting dependent claim **12**, the Examiner, citing Nakajima, col. 14, lines 45 – 57 and O'Rourke, Figure 13, has indicated

that Nakajima and O'Rourke teach advancing an active application / function / service / setting forward and backward one step by gliding an object along a touch-sensitive area respectively from left to right and from right to left. Applicant respectfully submits that the forward and backward operations described in Nakajima and O'Rourke are performed by tapping on arrowheads, and not by gliding an object left to right, or right to left. Use of touch-based scroll bars is described in Rogue with reference to Figure 1.2: *"To scroll ... tap one of the up/down triangle buttons on the scroll bar ..."*. Moreover, the cited location of Nakajima recites *"The double-headed arrow 18a ... is a sign of an up/down scroll function ... the user can understand ... the region assigned the function ..."*; i.e., tapping on sign 18a causes a scroll up.

The rejections of the claims **1 – 18** in paragraphs 3 - 7 of the Office Action will now be dealt with specifically.

As to amended independent claim **1** for a computer readable medium, applicant respectfully submits, as indicated hereinabove, that the limitation in claim **1** of

"each function ... being activated by an object touching the corresponding location and then gliding along the touch sensitive area away from the touched location"

is neither shown nor suggested in Nakajima, Rogue or O'Rourke.

Additionally, as indicated hereinabove, the limitation in amended dependent claim **2** of

"one function ... when activated, causes the user interface to display icons representing different services or settings for a currently active application"

is neither shown nor suggested in Nakajima, Rogue or O'Rourke.

Additionally, as indicated hereinabove, the limitation in amended dependent claim **6** of

"one function ... when activated, causes the user interface to display a list with a library of available applications and files on the mobile handheld computer unit"

is neither shown nor suggested in Nakajima, Rogue or O'Rourke.

Additionally, as indicated hereinabove, the limitation in dependent claim **8** of

"said list presents only files or only applications, and that an area of said list presents a field through which said list can be changed from presenting files to presenting applications, or from presenting applications to presenting files"

is neither shown nor suggested in Nakajima, Rogue or O'Rourke.

Additionally, as indicated hereinabove, the limitation in amended dependent claim **9** of

"list navigation whereby gliding the object along the touch sensitive area in a direction towards the top of said list or towards the bottom of said list causes said marking to move in the same direction without scrolling the list"

is neither shown nor suggested in Nakajima, Rogue or O'Rourke.

Additionally, as indicated hereinabove, the limitation in amended dependent claim **10** of

"if the object is (i) glided along said touch sensitive area to the top or bottom of said touch sensitive area, then (ii) raised above said touch sensitive area, then (iii) replaced on said touch sensitive area, and then (iv) again glided along said touch sensitive area to the top or bottom of said touch sensitive area, said list navigation pages the content of said list up or down by one whole page"

is neither shown nor suggested in Nakajima, Rogue or O'Rourke.

Additionally, as indicated hereinabove, the limitation in amended dependent claim **11** of

"if the object is raised from any first position on said touch sensitive area and then replaced on any second position on said touch sensitive area, said list navigation can be continued from said second position"

is neither shown nor suggested in Nakajima, Rogue or O'Rourke.

Additionally, as indicated hereinabove, the limitation in amended dependent claim **12** of

"an active application, function, service or setting is advanced one step by gliding the object along the touch sensitive area from left to right, and that the active application, function, service or setting is closed or backed one step by gliding the object along the touch sensitive area from right to left"

is neither shown nor suggested in Nakajima, Rogue or O'Rourke.

Because claims **2 – 16** and **18** depend from claim **1** and include additional features, applicant respectfully submits that claims **2 – 16** and **18** are not anticipated or rendered obvious by Nakajima, Rogue, O'Rourke, or a combination of Nakajima, Rogue or O'Rourke.

Accordingly claims **1 – 16** and **18** are deemed to be allowable.

Support for Amended Claims in Original Specification

Dependent claim **10** has been amended to include the limitations of the object being (i) glided along the touch sensitive area to the top or bottom position of the touch sensitive area, then (ii) raised above said touch sensitive area, then (iii) replaced on said touch sensitive area, and then (iv) again glided along said touch sensitive area to the top or bottom of said touch sensitive area. These limitations are supported in the original specification at least at page 7, line 32 – page 8, line 10; and FIG. 9.

For the foregoing reasons, applicant respectfully submits that the applicable objections and rejections have been overcome and that the claims are in condition for allowance.

Respectfully submitted,

Dated: April 22, 2009

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